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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,373	04/26/2001	Floribertus C.H. Mokveld	P 280261 9036US/CNT1	6577

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EXAMINER

SALVATORE, LYNDIA

ART UNIT PAPER NUMBER

1771

DATE MAILED: 11/07/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/842,373

Applicant(s)

MOKVELD ET AL.

Examiner

Lynda M Salvatore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-10 drawn to method for producing a shaped article classified in class 264, subclass 258.

II. Claims 11-14 drawn to a shaped article, classified in class, 442 and 428 subclasses 366 and 298.1 respectively.

2. The inventions are distinct, each from the other because:

The inventions of Group I and Group II are related as the product and device for making and are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, shaped article may be made by laminating two fiber layers together using an adhesive.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Paul Sharer on October 30<sup>th</sup> 2002 a provisional election was made with traverse to prosecute the invention of Process for the Production of a Shaped Article claims 11-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Applicant is advised that the reply to this requirement to complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

#### ***Claim Objections***

7. Claim 11 is objected to because of the following informalities: Claim 11 depends from non-elected claim 1. Appropriate correction is required.

8. In claim 14, it appears that there is some punctuation missing at the end of line 5. In addition, the Examiner suggests removing the parenthesis from the phrase "relative to the total weight of the fiber layer" and replace with commas. In addition, lines 9 and 13 of claim 14, recites "which" fibers. The Examiner suggests replacing the word, "which" with "said".

#### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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11. Claim 12 is indefinite because it is unclear to the Examiner whether the polyolefin fibers comprise a solvent or if the layers comprising the polyolefin fibers are treated with a solvent.

12. Claim 14 is indefinite because the term "highly" is a relative term which renders the claim indefinite. The term "highly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Additionally, it is unclear if "highly oriented" describes the molecular structure of an individual fiber (i.e., degree of crystallinity) or if it describes the arrangement of the fibers in a layer (i.e., unidirectional).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der loo et al., WO 97/00766 in view of Kavesh et al., US 4,413,110.

The published PCT application to Van der loo et al., is directed to a ballistic-resistant moulded article comprising a compressed stack of single layers. The layers consist of unidirectionally oriented reinforcing fibers and about 30 weight percent of a plastic matrix material (Abstract). The moulded ballistic-resistant article preferably has a specific energy absorption rating of at least 120 J/kg/m<sup>2</sup> (Page 2, 27-28). Preferably, the reinforcing fibers are

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made from ultra-high molecular weight polyethylene with a denier per filament greater than or equal to 1.5, have intrinsic viscosity of at least 5 dl/g and tensile modulus of at least 1000 cN/dtex (Page 6, 16-25).

Van der loo et al., fails to disclose the preparation of the polyethylene filaments, however, the patent issued to Kavesh et al., teaches forming fibers from a solution of ultra-high molecular weight polyethylene and a non-volatile solvent such as paraffin wax (Abstract and Column 7, 58-59). The amount of the non-volatile solvent used ranges from 2 to 15 weight percent (Column 4, 5-20). The tensile modulus can be as great as 2000 g/denier (Abstract). Kavesh et al., illustrates a series of fiber examples wherein the polymer intrinsic viscosity is 24, the denier of the filament is 4.3 and the tensile modulus is 1090g/denier (Column 12, 65-69 and example 24 in table 1 – Column 13, 24).

Therefore, motivated to provide a shaped article having a desired energy absorption rating it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the ballistic-resistant moulded article of Van der loo et al., with the high modulus, high strength polyethylene fibers taught by Kavesh et al.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5766725

US 5106563

US 5972498

US 6127291

US 5756660

US 4681792

US 5395671

US 5660913

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US 4650710  
US 4501856  
US 4550044  
US 4457985

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Is

November 4, 2002

  
CHERYL A. JISKA  
PRIMARY EXAMINER